

ED

<b>Notice of Allowability</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/687,602	CANRIGHT ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Merilyn P. Nguyen	2163	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

- 1. ☒ This communication is responsive to the RCE filed 03/08/2007 and the interview dated 05/25/2007.
- 2. ☒ The allowed claim(s) is/are 1-19, 25-37 and now renumbered as 1-32.
- 3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
  - 1. ☐ Certified copies of the priority documents have been received.
  - 2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

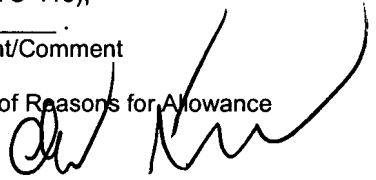
\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

- 4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  - 5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
- 6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |   |
|---|---|
| <ul style="list-style-type: none"> <li>1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)</li> <li>2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)</li> <li>3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO/SB/08),<br/>Paper No./Mail Date <u>01/29/2007</u></li> <li>4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material</li> </ul> | <ul style="list-style-type: none"> <li>5. <input type="checkbox"/> Notice of Informal Patent Application</li> <li>6. <input type="checkbox"/> Interview Summary (PTO-413),<br/>Paper No./Mail Date _____.</li> <li>7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment</li> <li>8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance</li> <li>9. <input type="checkbox"/> Other _____.</li> </ul> |
|---|---|



**ALFORD KINDRED  
PRIMARY EXAMINER**

### **DETAILED ACTION**

1. In response to the communication dated 03/08/2007 and 5/25/2007, claims 1-19 and 25-37 are active in this application and in condition for allowance.
2. PCT/US04/30908 is a continuation of this application.

### ***Information Disclosure Statement***

3. The information disclosure statement (IDS) submitted on 01/29/2007 was filed. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

### ***Examiner's Amendment***

4. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Michael E. Monaco, Reg. No. 52,041 on May 25, 2007.

The application has been amended as follows:

Claim 1 (Currently Amended): A computer-implemented method of ranking a relevance of a node in a linked set of nodes, comprising:

determining an authority weight for said node using a non-compound, non-normalized Forward operator and without using a Backward operator;

Art Unit: 2163

determining a hub weight for said node using a non-compound, non-normalized Backward operator and without using a Forward operator such that said steps of determining are mathematically decoupled;

ranking said relevance based upon said authority weight and said hub weight; ~~and~~  
~~at least one of~~ searching, navigating or retrieving one or more information objects in one or more electronic archives based upon said ranking; and  
storing, displaying or transmitting a result based on said searching, navigating or  
retrieving.

Claim 7 (Currently Amended): A system for ranking a relevance of a node in a linked set of nodes comprising:

a calculator configured to calculate an authority weight for said node and a hub weight for said node, using, respectively, a non-compound, non-normalized Forward operator without using a Backward operator and a non-compound, non-normalized Backward operator without using a Forward operator such that said calculations are mathematically decoupled, said calculator further configured to rank said relevance based upon said authority weight and said hub weight; and

a computer-based search engine configured to search, navigate or retrieve one or more information objects in one or more electronic archives based upon said ranked relevance, and to  
store, display or transmit a corresponding result.

Art Unit: 2163

Claim 13 (Currently Amended): A computer-implemented method of ranking a relevance of a node in a linked set of nodes, the improvement comprising:

determining one of

an authority weight for said node using a non-compound, non-normalized

Forward operator and without using a Backward operator,

a hub weight for said node using a non-compound, non-normalized Backward operator and without using a Forward operator;

ranking said relevance based upon said one of an authority weight and a hub weight; ~~and at least one of~~ searching, navigating or retrieving one or more information objects in one or more electronic archives based upon said ranking; and

storing, displaying or transmitting a result based on said searching, navigating or retrieving.

Claim 25 (Original): ~~A computer program product configured to host instructions corresponding to any one of the steps of~~ A computer readable storage medium storing a computer program including instructions configured to cause a processor-based device to execute the steps of one of Claims 1-6 and 13-18.

Claim 26 (Currently Amended): A system for ranking a relevance of a node in a linked set of nodes, comprising:

means for determining an authority weight for said node using a non-compound, non-normalized Forward operator without using a Backward operator;

Art Unit: 2163

means for determining a hub weight for said node using a non-compound, non-normalized Backward operator without using a Forward operator such that said means for determining an authority weight and said means for determining a hub weight are mathematically decoupled;

means for ranking said relevance based upon said authority weight and said hub weight;  
and

means for ~~at least one of~~ searching, navigating or retrieving one or more information objects in one or more electronic archives based upon said ranking; and

means for storing, displaying or transmitting a result output from said means for searching, navigating or retrieving.

Claim 32 (Currently Amended): A system for ranking a relevance of a node in a linked set of nodes, the improvement comprising:

means for determining one of  
an authority weight for said node using a non-compound, non-normalized Forward operator without using a Forward operator, and  
a hub weight for said node using a non-compound, non-normalized Backward operator without using a Backward operator;  
means for ranking said relevance based upon said one of an authority weight and a hub weight; and

means for ~~at least one of~~ searching, navigating or retrieving one or more information objects in one or more electronic archives based upon said ranking; and

means for storing, displaying or transmitting a result output from said means for searching, navigating or retrieving.

***Reason for Allowance***

5. The following is an examiner's statement of reason for allowance:

None of the references of record Chakrabarti (US Patent No. 6,356,899) and Maim (US 2005/0171946) teaches or suggests the claimed (Claim 1) invention having, in addition to the other limitations in the claim, the limitation of determining an authority weight for said node using a non-compound, non-normalized Forward operator and without using a Backward operator; determining a hub weight for said node using a non-compound, non-normalized Backward operator and without using a Forward operator such that said steps of determining are mathematically decoupled.

None of the references of record Chakrabarti (US Patent No. 6,356,899) and Maim (US 2005/0171946) teaches or suggests the claimed (Claim 7) invention having, in addition to the other limitations in the claim, the limitation of a calculator configured to calculate an authority weight for said node and a hub weight for said node, using, respectively, a non-compound, non-normalized Forward operator without using a Backward operator and a non-compound, non-normalized Backward operator without using a Forward operator such that said calculations are mathematically decoupled.

Art Unit: 2163

None of the references of record Chakrabarti (US Patent No. 6,356,899) and Maim (US 2005/0171946) teaches or suggests the claimed (Claim 13) invention having, in addition to the other limitations in the claim, the limitation of determining one of an authority weight for said node using a non-compound, non-normalized Forward operator and without using a Backward operator, a hub weight for said node using a non-compound, non-normalized Backward operator and without using a Forward operator.

None of the references of record Chakrabarti (US Patent No. 6,356,899) and Maim (US 2005/0171946) teaches or suggests the claimed (Claim 26) invention having, in addition to the other limitations in the claim, the limitation of means for determining an authority weight for said node using a non-compound, non-normalized Forward operator without using a Backward operator; means for determining a hub weight for said node using a non-compound, non-normalized Backward operator without using a Forward operator such that said means for determining an authority weight and said means for determining a hub weight are mathematically decoupled.

None of the references of record Chakrabarti (US Patent No. 6,356,899) and Maim (US 2005/0171946) teaches or suggests the claimed (Claim 32) invention having, in addition to the other limitations in the claim, the limitation of means for determining one of an authority weight for said node using a non-compound, non-normalized Forward operator without using a Forward operator, and a hub weight for said node using a non-compound, non-normalized Backward operator without using a Backward operator.

Dependent claims 2-6, 8-12, 14-19, 25, 27-31, and 33-37 are allowable because they depend from claims 1 and 7, 13, 26 and 32.

6. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance".

### ***Conclusion***

7. A shortened statutory period for response to this action is set to expire 3 (three) months and 0 (zero) day from the day of this letter. Failure to respond within the period for response will cause the application to become abandoned (see M.P.E.P 710.02(b)).

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Preda U.S Patent No. 7,076,483 discloses ranking nodes in a graph.

Bharat U.S Patent No. 7,117,206 discloses method for ranking hyperlinked pages using content and connectivity analysis.

Ravi Kumar, Prabhakar Raghavan and Sridhar Rajagopalan and Andrew Tomkins disclose, "The Web and Social Networks", 2002.



Art Unit: 2163

R. Lempel and S. Moran disclose, "Salsa: The Stochastic Approach for Link-Structure Analysis", 2001.

Kazunari Sugiyama, Kenji Hatano, Masatoshi Yoshikawa and Shunsuke Uemura disclose, "Refinement of TF-IDF Schemes for Web Pages using their Hyperlinked Neighboring Pages", 2003.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marilyn P Nguyen whose telephone number is 571-272-4026.

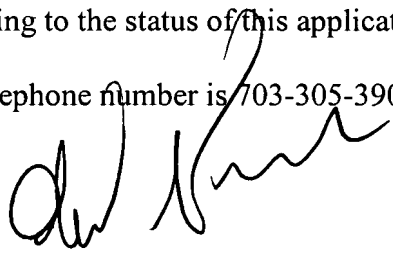
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on 571-272-1834. The fax phone numbers for the organization where this application or proceeding is assigned are 571-273-8300 for regular communications and 703-746-7240 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

MN

MN

May 25, 2007



ALFORD KINDRED  
PRIMARY EXAMINER